MANAGEMENT PLANS FOR SIGNIFICANT PLANT AND WILDLIFE HABITAT AREAS OF MARYLAND'S EASTERN SHORE: CAROLINE COUNTY

APPENDIX B TO

FINAL REPORT

SUBMITTED TO:

Coastal Resources Division
Tidewater Administration

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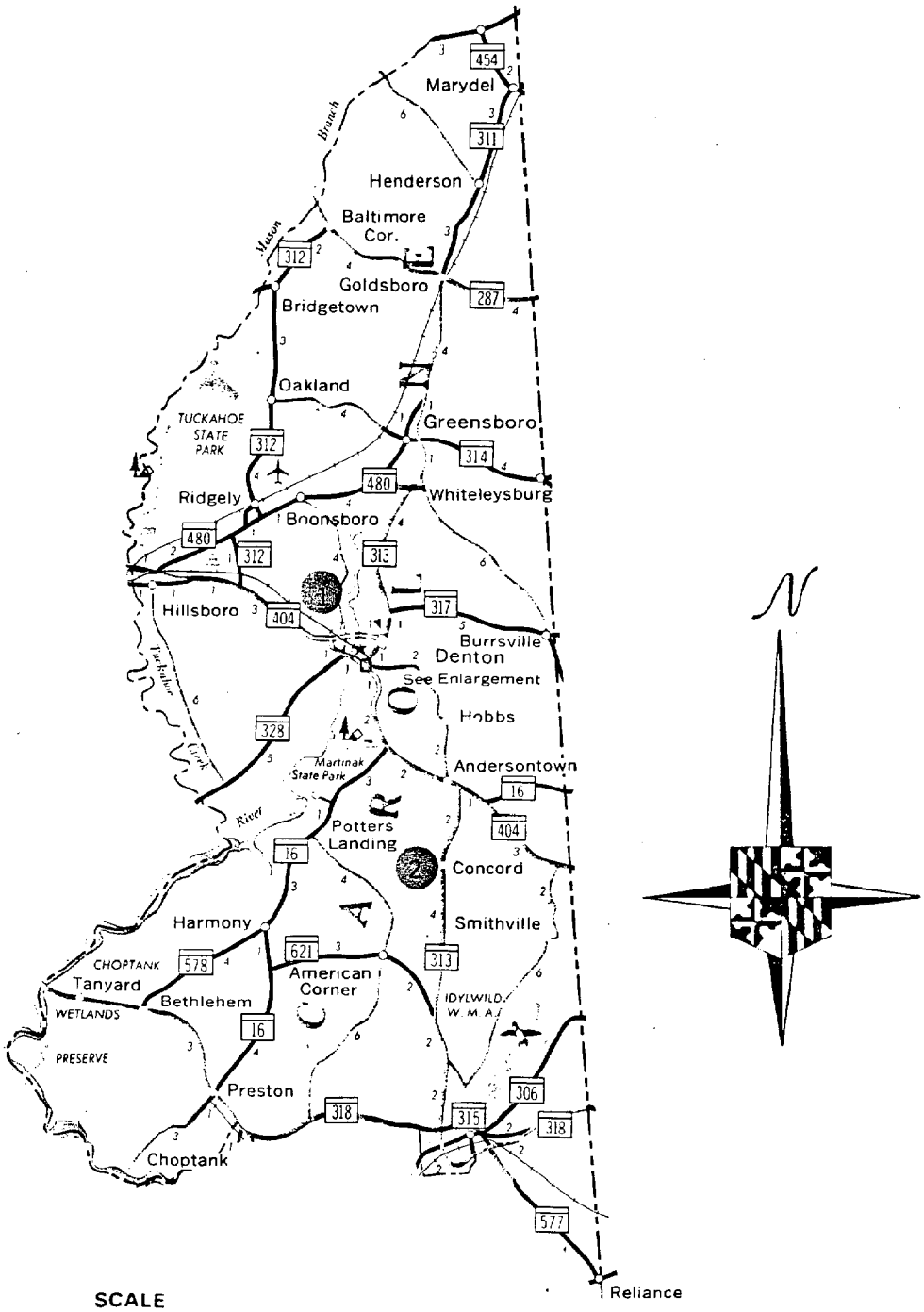
CAROLINE COUNTY



CAROLINE COUNTY: Protection Area Locations

Protection Area	Site # on County Map
Central Avenue Corner	1
Opossum Hill Powerline	2

PROTECTION AREA SUMMARY

Protection Area Name: Central Avenue Corner

County: Caroline USGS Quad: Denton

SUMMARY OF ECOLOGICAL SIGNIFICANCE:

Central Avenue Corner is an unusual forested wetland containing at least eleven small ponds with various hydrologic regimes. The diverse wetland types provide habitats for a great variety of plant and animal species. These wetlands are examples of small seasonal ponds, centripetally-drained wetlands found almost exclusively on the Eastern Shore. Seasonal ponds fill with water during winter and early spring, and dry out by late summer as groundwater recedes. They often contain rare, disjunct, or endemic species. Seasonal ponds were once more common on the Eastern Shore, but many have been drained for agricultural use. The ponds in this protection area remain relatively undisturbed. If their hydrologic regimes are maintained in a natural condition, they will continue to support rare species.

Four rare species inhabit Central Avenue Corner Protection Area. Three of these species emerge and flower when the ponds dry out in late summer and fall. Two of these plants are known from fewer than ten other locations in Maryland.

OTHER VALUES AND SIGNIFICANCE:

These non-tidal wetlands provide ideal feeding and resting habitat for numerous amphibians, songbirds, and other wildlife. Additional rare species may also inhabit the seasonal ponds. The site has been surveyed in the autumn only. Because the flora and fauna of these ponds vary seasonally and annually with water levels, several visits will be necessary to complete the species inventory for this protection area.

THREATS AND MANAGEMENT NEEDS:

Threats

These ponds are subject to several threats. Since their hydrologic regime is dependent on groundwater levels, the quantity and quality of local groundwater is critical. Depletions in groundwater brought on by agricultural and residential use

could cause the ponds to dry out to the extent that trees and shrubs could invade and outcompete the rare herbaceous species. Drainage ditches that have been excavated in adjacent fields may lower the water table in the wetland habitat of the rare species.

On the west side of the protection area is an old excavation site. Construction of a house is occurring just south of the protection area. Some trees have been cut and heavy machinery has crossed the southern end of the site. If these activities are extended farther into the protection area, the rare species in the seasonal ponds may be destroyed. Removal of trees or excavation too close to the ponds may endanger the rare species in the ponds by altering local hydrology or by allowing the invasion of weedy non-native species which often outcompete rare species.

Management Needs

No new ditching or removal of forest vegetation should be conducted within the protection area boundaries. The encroachment of woody species into the seasonal ponds should be monitored. It may be necessary in the future to take steps to reduce the effects of local agricultural ditching on the rare species habitat.

Landowners should be encouraged to protect the seasonal ponds by maintaining the undisturbed hydrologic regime and forest cover. Construction activities should be conducted as far from the seasonal ponds as possible.

BOUNDARY RECOMMENDATIONS:

The protection area encompasses the numerous seasonal ponds and other small wetland areas, as well as forested buffers of 150-300 ft. around them to protect the local hydrology.

SITE DESCRIPTION SUMMARY:

Central Avenue Corner is a forested, 83 acre protection area which contains at least eleven small seasonal ponds. None of these wetlands is more than two acres in size, and all dry completely by late summer. The dominant forest vegetation consists of Red Maple, Sweet Gum, Persimmon, Black Gum, and Willow Oak. In slightly drier areas, shrubs are abundant, including Sweet Pepperbush, blueberry, and greenbrier. Most of the forested ponds support the same tree species, especially Persimmon and Willow Oak. Several non-forested ponds are dominated by Buttonbush. Herbaceous cover consists of grasses, sedges, Fireweed, and a rare herbaceous species in the three open ponds. In the ponds with a closed forest canopy, herbaceous

cover is limited to sedges which do not appear until autumn. The northern and eastern margins of the protection area contain open land consisting of farm fields and several 20 ft. deep ditches that were excavated to drain this naturally wet area.

Prepared by: Judith L. Robertson

Date: November 1988

PROTECTION AREA SUMMARY

Protection Area Name: Opossum Hill Powerline

County: Caroline USGS Quad: Hobbs

SUMMARY OF ECOLOGICAL SIGNIFICANCE:

Opossum Hill Powerline Protection Area contains a bog-like wetland that includes four rare plant species. Coastal Plain bogs are non-tidal wetlands that support unusual botanical communities adapted to acidic, saturated soils. The bogs are usually dominated by shrubs or herbaceous species and lack trees. Many non-tidal wetlands on the Eastern Shore, including bogs, have been lost due to ditching and draining for agriculture and for residential and commercial development.

Powerline rights-of-way provide significant habitats for several threatened and endangered plant species. The management of woody vegetation in the rights-of-way has created habitats that are similar, although not identical, to herbaceous wetland openings created historically by fire and beaver. Natural forest openings have been nearly eliminated by modern fire suppression practices, and beaver populations on the Eastern Shore have declined drastically.

Four rare species occur in the boggy powerline opening. One species is known from only one other site in Maryland and is at the northern limit of its range. Two other species are known from fewer than seven other locations in Maryland.

OTHER VALUES AND SIGNIFICANCE:

This protection area encompasses a portion of the headwaters of the stream that feeds Williston Lake. Maintenance of the local hydrology of the wetland will aid in the preservation of water quality of this stream and the lake.

THREATS AND MANAGEMENT NEEDS:

Threats

Changes in the quality or quantity of water in the wetlands would produce changes in its vegetation and could eliminate the rare species. Clearing of the adjacent forest or ditching in the powerline or adjacent forest would threaten the rare species habitat by altering the hydrologic regime in the wetland.

Clearing of the forest would also promote the growth of weedy species that could outcompete the rare species.

Powerline maintenance activities could be detrimental to the rare species. The use of non-selective chemicals to kill woody vegetation could also harm the rare herbaceous species. One of the rare species is a shrub which might be targeted for herbicide application even if treatment is limited to woody species. Mowing during the growing season could inhibit flowering and fruiting of the rare species. The use of heavy machinery would compact the soil, rut the surface, and alter drainage patterns in the wetland.

Management Needs

No activities that would change the quantity or reduce the quality of water in the wetland should be conducted.

No forest vegetation should be cleared and no ditching should be conducted within the protection area. Plans for ditching in the surrounding area should be reviewed for potential effects on the rare species' habitat.

A management agreement with the utility company should be initiated to ensure that powerline maintenance procedures are consistent with rare plant protection. The use of heavy vehicles or machinery within the powerline should be minimized. Any herbicide use should be conducted in a manner that will avoid damaging the rare plants, including the rare shrub species.

BOUNDARY RECOMMENDATIONS:

The protection area encompasses the rare species habitat in the powerline right-of-way, and a forested buffer on each side. The upstream buffer incorporates the headwaters of the forested creek in order to ensure the maintenance of high water quality in the open bog.

SITE DESCRIPTION SUMMARY:

This 75 acre protection area encompasses a wetland in a powerline right-of-way and the forested stream which flows into the wetland. The forest surrounding the stream is dominated by wetland trees such as Red Maple, Sweet Gum, Red Oak, blueberry, Sweet Pepperbush, rhododendron, and Sweet Bay. Management practices within the 250 ft. wide powerline right-of-way have reduced the height of woody vegetation to under approximately six ft. Dominant vegetation includes Red Maple and Sweet Gum saplings, as well as blueberry, blackberry, grasses, sedges, Joe-pye-weeds, sphagnum moss, club moss, and ferns. The ground is

quite hummocky, and the lowest, wettest areas support only sphagnum moss, panic grasses, sedges, and three rare bog species.

The main branch of the creek flows northwest through the right-of-way and is joined by a smaller branch which enters from the south. Cattails, jewelweed, rushes, sedges, grasses, seed-box, milkweed and a rare shrub species are abundant along the margins of the stream. Weedy species such as Japanese Honeysuckle, Phragmites, Poison Ivy and Virginia Creeper are also present.

Prepared by: Judith L. Robertson

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